

Application No.: 10/617,624

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Docket No.: 595792000300

REMARKS

Upon entry of this amendment, claims 1, 9-11 and 18-21 are pending. Claims 1 and 18 have been amended. No new matter was added by this amendment. Claims 2-8 and 12-17 have been canceled without prejudice to subsequent revival. The Applicants reserve the right to prosecute these canceled claims in a divisional application. Entry of this amendment is respectfully requested.

The Amendment

In order to expedite prosecution of the application and advance the case toward allowance, the claims have been amended.

Claim 1 has been amended to specify that the transgenic oil crop plant comprises a recombinant plant-derived NHX-type transporter protein. Support for this amendment can be found throughout the specification and, for example, on page 6, paragraph 0025 and on pages 24-25, paragraph 0079.

Claim 18 has been amended to correct for proper claim dependency and to add the word "a" before "promoter".

Rejection Under 35 U.S.C. §112

Claims 1, 9-11 and 17-21 remain rejected and claims 22-30 are newly rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. The Examiner specifically objects to the term "normal or near normal" in the claims.

The term "normal or near normal" has been deleted from the claims. Thus, this rejection is moot.

Claims 1, 9-11 and 21 remain rejected and claims 22-25 and 30 are newly rejected under 35 U.S.C. §112, first paragraph, as allegedly lacking enablement. The Office Action indicates that the specification is enabling for a transgenic plant comprising a Na⁺/H⁺ transporter transgene set forth in SEQ ID NO: 1, but allegedly not enabling for a transgenic plant comprising any NHX-type transporter protein.

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To the extent that the rejection applies to the claims as amended it is respectfully traversed.

Claim 1 has been amended to specify that the transgenic oil crop plant comprises a recombinant plant-derived NHX-type transporter protein. The Applicants teach how to make a transgenic oil crop plant with an NHX-transporter protein as shown in paragraphs 0079-0084. In fact, 64 such transgenic oil crop plants were produced (see page 24 of the specification, paragraph 0079). As such, the claims are fully enabled.

In light of the foregoing amendment and remarks, Applicant respectfully requests withdrawal of the rejection of claims 1, 9-11 and 21 under 35 U.S.C. §112, first paragraph.

Claims 1, 9-11 and 21 remain rejected and claims 22-25 and 30 are newly rejected under 35 U.S.C. §112, first paragraph, as allegedly lacking written description. The Office Action alleges that the specification fails to correlate the structures of the broadly claimed genus to the function of salt tolerance, and that the only structure whose function has been correlated with increased salt tolerance is the one described in SEQ ID NO: 1.

To the extent that the rejection applies to the claims as amended it is respectfully traversed.

As noted above, claim 1 has been amended to specify that the transgenic oil crop plant comprises a recombinant plant-derived NHX-type transporter protein. The Examiner is reminded that "[A]n objective standard for determining compliance with the written description requirement is, 'does the description clearly allow persons of ordinary skill in the art to recognize that he or she invented what is claimed.'"¹

The Applicants have provided 37 examples of amino acid sequences encoding plant-derived NHX-type transporter proteins (Table III, page 35). As explained in the last response, the analysis of so many sequences permits identification of conserved regions within the genus. One of skill would clearly recognize what is meant by an NHX-type transporter protein in light of that much information. The Examiner has not explained why 37 examples of amino acid sequences encoding plant-derived NHX-type transporter proteins from different species would not be enough for the skilled artisan to recognize a genus. "The examiner has the initial burden of presenting

¹ *In re Gastel*, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989). See also MPEP 2163.02.

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evidence or reasons why persons skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims."² Even in *University of California v. Eli Lilly & Co.*, the Court of Appeals for the Federal Circuit stated that a written description for a chemical genus "requires a precise definition, such as by structure, formula, chemical name or physical properties."³ [Emphasis added.] The application teaches 37 structures of NHX-type transporter proteins, wherein the Applicants have provided an analysis for the first 18 sequences as shown by the bolded amino acids in Table III. Thus, the Applicants were clearly in possession of the genus of a transgenic oil crop plant comprising a recombinant plant-derived NHX-type transporter protein at the time of the invention.

In light of the foregoing amendment and remarks, Applicant respectfully requests withdrawal of the rejection of claims 1, 9-11 and 21 under 35 U.S.C. §112, first paragraph.

Claims 1, 9-11 and 17-30 are rejected under 35 U.S.C. §112, first paragraph, as allegedly lacking written description. The Examiner specifically objects to the recitation "under a salt concentration that causes at least a relative yield decrease of 35 percent." The claims have been amended to delete this recitation. Hence, the rejection is moot.

² 541 F.2d at 265, 191 USPQ at 98. See also *Ex parte Sorenson*, 3 USPQ2d 1462, 1463 (Bd. Pat. App. & Inter. 1987), (MPEP 2163.04).

³ *University of California*, 43 USPQ2d at 1405..

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CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 595792000300. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

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